

Applicant: Masayuki TSUCHIYA et al.
Docket No. (06:07)
Preliminary Amdt.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3. (Canceled)

4. **(New)** In an apparatus for thixocasting a cast iron, comprising at least a pair of dies that can be freely opened and closed to form a die cavity which is to be filled with semi-molten cast iron under a pressure, injection means operable to inject the semi-molten injected material into the die cavity through an injection path, and a gate located at the entry of the die cavity so as to throttle entry from the injection means into the die cavity, the improvement wherein the gate is constituted from a separate gate member and is disposed at the entry of the cavity each time an injection casting operation is carried out and is taken out together with the casting after the injection casting operation is completed.

5. **(New)** The apparatus for thixocasting a cast iron according to claim 4, wherein the gate member has a projecting portion formed to a certain extent around the gate hole facing the injection path.

6. **(New)** In a method of thixocasting a cast iron, which comprises filling a cavity in dies with semi-molten cast iron that is injected through a gate that throttles the entry of the cavity

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under a pressure, the improvement wherein the injected material is covered on the circumference thereof by a steel sheet 0.2 to 0.5 mm thick and having a melting point higher than that of the injected material.

7. **(New)** The method of thixocasting a cast iron according to claim 6, wherein the cast iron material is injected through a gate hole having a projecting portion formed to a certain extent around the gate hole and facing the injection path.

8. **(New)** The method of thixocasting a cast iron according to claim 6, wherein the steel sheet is a stainless steel sheet.

9. **(New)** The method of thixocasting a cast iron according to claim 7, wherein the steel sheet is a stainless steel sheet.